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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,109	07/10/2003	Murali Krishna Akkapeddi	H0003997(4300)	2615
7590	02/01/2006		EXAMINER	
Richard S. Roberts Roberts & Mercanti, L.L.P. P.O. Box 484 Princeton, NJ 08542-0484			WOODWARD, ANA LUCRECIA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/617,109	AKKAPEDDI ET AL.
	Examiner	Art Unit
	Ana L. Woodward	1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)  Responsive to communication(s) filed on 7/10/2003, 12/03/2004, 8/18/2005, 11/15/2005.  
 2a)  This action is FINAL. 2b)  This action is non-final.  
 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 1-42 is/are pending in the application.  
 4a) Of the above claim(s) 2,3, 6-7 and 24-42 is/are withdrawn from consideration.  
 5)  Claim(s) \_\_\_\_\_ is/are allowed.  
 6)  Claim(s) 1,4 and 8-23 is/are rejected.  
 7)  Claim(s) \_\_\_\_\_ is/are objected to.  
 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9)  The specification is objected to by the Examiner.  
 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a)  All b)  Some \* c)  None of:  
 1.  Certified copies of the priority documents have been received.  
 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 12/03/04, 7/10/03

4)  Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5)  Notice of Informal Patent Application (PTO-152)  
 6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I comprising a polyamide homopolymer as the ultimate species of component (i) in the replies filed on August 18, 2005 and November 15, 2005 is acknowledged. The traversal is on the ground(s) that the allegedly different classes of inventions may be included and examined in a single application provided they are so linked as to form a single inventive concept. This is not found persuasive because applicant has not submitted evidence or identified such evidence now of record showing the species to be obvious variants or clearly admitted on the record that this is the case.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2, 3, 5-7 and 24-42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species or group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the replies filed on August 18, 2005 and November 15, 2005.

***Claim Rejections - 35 USC § 112***

3. Claims 8, 11, 12 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not describe how to make semi-aromatic polyamides having the repeating unit wherein an aromatic dicarboxylic acid moiety is attached directly to an aliphatic dicarboxylic acid moiety as depicted by formula II.

4. Claims 1, 4 and 8-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2, it is unclear as to whether or not the recited “copolymer” is to be a polyamide copolymer.

In claim 1, no distinction can be seen between the polyamide nanoclay and either of the polyamide homopolymer or the polyamide copolymer defining component (i). In this regard, it is noted that the polyamide homopolymer and the polyamide copolymer comprise polyamide nanocomposites, which read on the polyamide nanoclay.

In claim 8, line 3, “generalized” is indefinite as to scope and meaning.

In claim 8, the values of x and y, independently, are not defined.

In claims 8 and 9, it is unclear how the structure I wherein Z= an arylene group, that is, a wholly aromatic structure, can be definitive of the *semi-aromatic* polyamide.

In claims 8 and 11, it is unclear how the structure II wherein x is zero, that is, a wholly aliphatic structure, can be definitive of the *semi-aromatic* polyamide.

In claims 8, 11, 12 and 15, it is not clear how the aromatic dicarboxylic acid moiety is attached directly to the aliphatic dicarboxylic acid moiety as depicted by formula II.

In claims 10, 12, 17 and 21-23, the meaning of the recited polyamide abbreviations is not apparent.

In claim 11, the relevance of the recited definition for Z is not apparent.

In claim 16, “substituted” is indefinite as to scope and meaning.

In claim 17, it is unclear if or how the polyamides having an aromatic diamine moiety, e.g., PA-6/MXDI, PA-6/MXDT and PA-TDAI, are definitive of the depicted structure.

In claims 18 and 19, the basis upon which the amounts recited are based upon is not apparent. That is, are they based on total weight of composition or solely upon the sum of the recited components?

In claim 19, it is unclear how the upper limit of component (i) can be utilized without exceeding 100% by weight.

In claims 20 and 23, it is unclear how nylon 6 nanocomposite can be definitive of the polyamide homopolymer or the polyamide copolymer.

***Claim Rejections - 35 USC §102/103***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 8-12 and 15-23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 6,416,832 (Uehara et al).

Uehara et al disclose packaging films and sheets having at least one layer formed of a polyamide composition comprising a copolymer nylon (c) composed of an aliphatic nylon

(co)polymer component (1) and an aromatic nylon (co)polymer (2). The reference discloses various polyamide compositions meeting the requirements of the above-rejected claims both in terms of the types of materials added and their contents. Exemplary compositions include Examples 1-5 and comparative example 3 comprising nylon 6, reading on the presently claimed component (i), amorphous nylon GRIVORY G21, reading on the presently claimed component (iii), and semi-aromatic polyamides, such as nylon 6/12/MXD6, nylon 610/MXD6 and nylon MXD6, reading on the presently claimed component (ii).

Given the chemical similarity of the reference compositions to those presently claimed, it would be expected that the former would necessarily be “slow crystallizing”. The onus is shifted to applicants to establish that the product of the present claims is not the same as or obvious from that set forth by the reference.

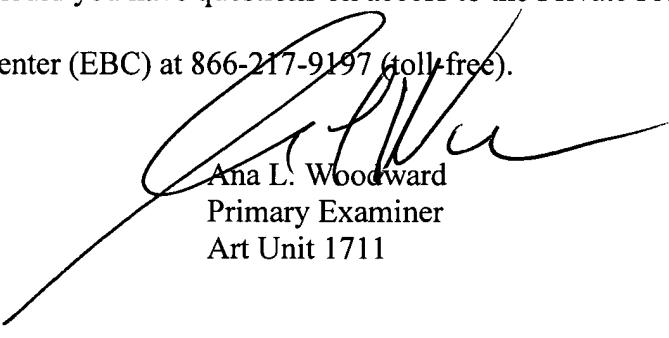
Claims 11, 12 and 15 have been incorporated because the exemplified nylon 6/12/MXD6 and nylon 610/MXD6 species have recurring aromatic/aliphatic units meeting structure I (MXD6) and recurring aliphatic units meeting structure II (6/12 or 610) as defined when x is 0.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana L. Woodward  
Primary Examiner  
Art Unit 1711

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